

KHOMUTOV, B.I., kand. tekhn. nauk; KOROLEV, G.V., kand. khim. nauk

Concerning N.M. Emanuel and IU.N. Liaskovskaja's book "Retarding oxidation processes in oils and fats." Masl.-zhir. prom. 28 no.10:40-41 O '62. (MIRA 16:12)

KHOMUTOV, B.I., kand. tekhn. nauk; KULAKOVSKAYA, N.A., kand. biolog. nauk

Spectrophotometric determination of butyloxyanisole and dodecyl
gallates in fats and oils. Vop. pit. 22 no.4:76-82 Jl-Ag '63.
(MIRA 17:10)

1. Iz Nauchno-issledovatel'skoy laboratorii Ministerstva zdravo-
okhraneniya SSSR, Moskva.

ANBINDER, Ya.Ye. [Anbinder, IA.IE.]; SHPAKOVSKIY, N.Ye. [Shpakovs'kyi, N.E.];
DARBINYAN, S.A.; KOMAROV, V.V.; KOMAROVA, T.V.; KOZLOV, Yu.A.; KONOKOTIN,
L.P.; ZEREKIDZE, V.M.; SHULYATITSKIY, S.M. [Shyliatys'kyi, S.M.];
KHODURSKIY, Ye.A. [Khodurs'kyi, IE.A.]; OBUSHINSKIY, Ye.I. [Obushyns'kyi,
IE.I.]; GVOZDIK, A.A. [Hvozdyk, A.A.]; NIKITINA, M.A.; LUPASHKO, N.F.;
BESKROVNYY, M.N.; TSIMBLER, M.Ye. [TSymbler, M.IE.]; ILYN, A.N.; TOTADZE,
P.M.; ZHIGURS, Kh.Yu.; ZAKREVSKIY, Ye.S. [Zakrevs'kyi, IE.S.];
FEDOROVICH, A.G. [Fedorovych, A.H.]; CHALENKO, D.K.; KHOMUTOV, D.A.;
SKURIKHIN, I.M.; NILOV, V.I.; YEFIMOV, B.N. [IEfimov, B.N.]; KAZANOVSKIY,
V.S. [Kazanovs'kyi, V.S.]; ZOTIKOV, L.S.; KOCHURENKO, M.A.

Soviet certificates of invention. Khar. prom. no.2:57-59 Ap-Je '65.
(MIRA 18:5)

KHOMUTOV, K. M.

KHOMUTOV, K. M.- "Investigation and Geometric Fundamentals of Graphic Methods for Construction of Curved Surfaces." Min of Higher Education USSR, Leningrad Order of Labor Red Banner Technological Inst imeni Lensoviet, Chair of Descriptive Geometry and Graphics, Leningrad, 1955 (Dissertations for Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

XHOMUTOV, K.M.

Some problems in the theory of the designing of the curved
surfaces of streamlined shapes. Trudy LIKI no. 5:130-137
'59. (MIRA 13:12)

1. Kafedra grafiki Leningradskogo instituta kinoinzhenerov.
(Surfaces) (Geometrical drawing)

MOTYKO, Aleksandr Stepanovich; OSTROVSKIY, Isaak Davidovich; RIKHTER, A.A., inzh., retsentsent; KHOMUTOV, K.M., kand. tekhn. nauk, dots., red.; CHFAS, M.A., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Developed sheet product surfaces] Razvertki poverkhnostei listovykh izdelii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 94 p. (MIRA 15:1)
(Sheet-metal work) (Surfaces (Technology))

KHOMUTOV, K.M.; BAGRINTSEVA, M.B.

Analysis and calculation of image distortions in wide film projection on a curvilinear screen for the planned 4000 seat movie and concert hall in Leningrad. Trudy LIKI no.11:93-104 '64.

(MIRA 18:10)

1. Kafedra grafiki Leningradskogo instituta kinoinzhenerov.

GLIKMAN, S.A.; AVER'YANOVA, V.M.; KHOMUTOV, L.I.

Structure of acetylcellulose solutions. Vysokom.sosed. 5 no.4:
598-604 Ap '63. (MIRA 16:5)

1. Saratovskiy gosudarstvennyy universitet imeni N.G.Chernyshevskogo.
(Cellulose acetates)

KHOMUTOV, L.I.; TROFIMOVA, G.P.; KORSHAGINA, Ye.P.; GLIEMAN, S.A.

Gelation processes and visco-elastic properties of gels.

Zhur.prikl.khim. 38 no.3:638-643 Mr '65.

(MIRA 18:11)

1. Submitted March 19, 1964.

KHOMUTOV, L.I.; KORCHAGINA, Ye.P.; GLIKMAN, S.A.

Thermal characteristics of gels. Zhur. prikl. khim. 38 no.4:
786-791 Ap '65. (MIRA 18:6)

KHOMUTOV, M.V.

AUTHOR: None given

25-8-37/42

TITLE: The VIth All-Union Meeting of Phthisiologists (VI Vsesoyuznyy s'yezd ftiziatrov)

PERIODICAL: Nauka i Zhizn', 1957, # 8, pp 59-60 (USSR)

ABSTRACT: More than 1,000 delegates of the USSR and foreign countries took part in the VIth All-Union Meeting of Phthisiologists in Moscow in June 1957. One of the main problems to be discussed was "The development of control of tuberculosis in the USSR and the tasks to bring about a further reduction in the number of tuberculosis cases." The two lecturers on this topic, M.V. Khomutov, Deputy Minister of Health of the USSR, and A.I. Lapina, Main Inspector for the Control of Tuberculosis of the Ministry of Health of the USSR, dealt with the progress achieved in this field during the past few years. In 1948, only 894,000 newborn children and 115,000 older children were inoculated against tuberculosis. In 1956, the number had already increased to 6.3 million children and in 1957 about 12.6 million children were treated. Moreover, medical examinations of the population are carried out in order to discover the disease at the very beginning. In comparison with 1949, the mortality rate was reduced by 70%

Card 1/2

The VIth All-Union Meeting of Phthisiologists

25-8-37/42

and the number of cases by 43%. Candidate of Medical Sciences, A.S. Mamolat, spoke about his experiences gained in controlling tuberculosis in villages. Professor, A.I. Kudryavtsev, dealt with the prophylactic effect of the vaccine against tuberculosis. Professors, R.O. Drabkin, M.A. Klebanov, V.L. Eynis, A.Ye. Rabukhin, Member-Correspondent of the USSR Academy of Medical Sciences (Akademiya meditsinskikh nauk SSSR), N.A. Shmelev, and others, dealt with chemotherapy of tuberculosis. The final meetings of the delegates were devoted to the problem of surgical treatment of tuberculosis. L.K. Bogush, Member-Correspondent of the USSR Academy of Medical Sciences, Professors, N.M. Amosov (Kiyev), I.S. Kolesnikov (Leningrad), F. Kovach (Hungary), Doctor O.T. Iliyesku (Rumania) and others, lectured on this subject.

AVAILABLE: Library of Congress

Card 2/2

KHOMUTOV, M.V.

Measures for advanced training and disposition of personnel. Sov.
zdrav. 16 no.1:4-9 Ja '57. (MLRA 10:2)

1. Zamestitel' ministra zdravookhraneniya SSSR.
(PUBLIC HEALTH
in Russia, med. serv., progr.)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

~~ANOMALY, M.V.~~

Status and aims of medical care for children. Sov.zdrav. 16 no.8:
S-7 Ap '57. (MLRA 10:10)

1. Zamestitel' ministra zdravookhraneniya SSSR.
(CHILD WELFARE
med. care in Russia)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

GUMAROVA, F.G.; GOSTEVA, A.G.; TULEGENOV, Z.K.; MAKASHEVA, S.U.; POLOSUKHIN, A.P.; MUSABEKOV, A.M.; DANILOV, Yu.S.; NIGMATULIN, M.A.; ZAKHAROV, F.G.; LUZINA, Z.T.; MPESOV, T.I.; STASYUNAS, I.P.; ISABEKOV, O.I.; SARSEMBAYEVA, K.; KATSYUBA, V.T.; LENOVSKIY, A.S.; AKHMEDOV, K.Yu.; SUBKHANBERDIN, S.Kh.; KISLITSINA, N.P.; POLIKARPOV, S.V.; ZAIROV, K.S.; APSATAROV, A.A.; NOVOSEL'TSEV, V.N.; PETROV, N.N.; KHOMUTOV, M.V.; GALUSTYAN, A.S.; ARTYKOV, A.Ye.; DZHANDIL'DIN, N.D.; KOVRIGINA, M.D.; BEYSEBAYEV, M.; BUBLIK, V.N.; CHERNYSH, A.M.

Discussion on the report of S.R.Karynbaev, Minister of Public Health of the Kazakh S.S.R., on the status and improvement of medical care. Zdrav.Kazakh. 17 no.4/5 '57. (MIRA 12:6)

1. Zav. Alma-Atinskym oblastnym zdravotdelom (for Gumarova).
2. Vrach bol'nitsy g.Leninogorska Vostochno-Kazakhstanskogo oblzdravotdela (for Gosteva). 3. Zav. Karagandinskym oblastnym otdelom zdravookhraneniya (for Tulegenov). 4. Zav.Kzyl-Ordinskym oblastnym otdelom zdravookhraneniya (for Makasheva). 5. Vitse-prezident AN KazSSR (for Polosukhim). 6. Zav.Aktyubinskym oblastnym otdelom zdravookhraneniya (for Musabekov) 7. Ministr zdravookhraneniya Kirgizii (for Danilov).

(Continued on next card)

GUMAROVA, F.G.---(continued) Card 2.

8. Zav.Vostochno-Kazakhstanskim oblastnym otdelom zdravookhrameniya (for Migmatulin). 9. Chlen kollegii Ministerstva zdravookhraneniya SSSR (for Zakharov). 10. Zav.Kustanayskim oblastnym otdelom zdravookhraneniya (for Luzina). 11. Ministr zdravookhraneniya Turkmenskoy SSR (for Nepesov). 12. Zav.sel'skim vrachebnym uchastkom Priirtyshskogo rayona Pavlodarskoy oblasti (for Stasyunas). 13. Glavnnyy vrach Kapal'skoy rayonnoy bol'nitsy Taldy-Kurganskoy oblasti (for Isabekov). 14. Zav. zhenotdelom Yuzhno-Kazakhstanskogo obkoma partii (for Sarsenbayeva). 15. Zav. Dzhambulskim oblastnym otdelom zdravookhraneniya (for Katsyuha). 16. Glavnnyy vrach Alma-Atinskogo oblastnogo tuberkuleznogo dispansera (for Lenovskiy). 17. Ministr zdravookhraneniya Tadzhikskoy SSR (for Aichmedov). 18. Nachal'nik Kazaptekoupravleniya (for Subkhanberdin).

(Continued on next card)

GUMAROVA, F.G.---(continued) Card 3.

19. Zav. Semipalatinskim oblastnym otdelom zdravookhraneniya (for Kisiltsina).
20. Predsedatel' respublikanskogo komiteta soyuza medrabotnikov (for Polikarpov).
21. Zam. ministra zdravookhraneniya Uzbekskoy SSR (for Zairov).
22. Zav. Alma-Atinskim gorodskim otdelom zdravookhraneniya (for Apsatarov).
23. Zav. Severo-Kazakhstanskim oblastnym otdelom zdravookhraneniya (for Novosel'tsev).
24. Zav. rayzdravotdelom Shortandin-skogo rayona Akmolinskoy oblasti (for Petrov).
25. Zav. ministra zdravookhraneniya Soyusa SSR (for Khomutov).
26. Zav. ministra zdravookhraneniya ArmSSR (for Galustyan).
27. Predsedatel' Komiteta fizicheskoy kul'tury i sporta pri Sovete Ministrov KazSSR (for Artykov).
28. Sekretar' TSentral'nogo Komiteta Kommunisticheskoy partii Kazakhstana (for Dzhandil'din).
29. Ministr zdravookhraneniya Sovetskogo Soyusa (for Kovrigina).
30. Pervyy zamestitel' predsedatelya Soveta Ministrov KazSSR (for Beysebayev).
31. Uchastkovyy vrach Kustanayskoy oblasti (for Bublik).
32. Zam. predsedatelya Obshchestva Krasnogo Kresta Kazakhstana (for Chernysh).

(KAZAKHSTAN--PUBLIC HEALTH)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

~~KHOMUTOV, M.~~

Explanation of decree No.282-M, dated 26 December 1956. Arkh.pat.
19 no.6:92 '57. (MLia 10:10)

1. Zamestnikei' ministra zdravookhraneniya Soyusa SSR.
(Medical laws and legislation)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

KHOMUTOV, M.V.

Measures to reduce the incidence of tuberculosis. Probl. tub. 35 no.6:
3-10 '57. (MIRA 12:1)

1. Zameniteli' ministra zdravookhocheniya SSSR.
(TUBERCULOSIS, prev. & Control
in Russia (Rus))

KHOMUTOV, M.V.

Status and measures for the improvement of medical services for
workers in industry. Sov.zdrav. 17 no.7:3-12 J1 '58 (MIRA 11:8)

1. Zamestritel' ministra zdravookhraneniya SSSR.
(INDUSTRIAL HYGIENE
med.serv., methods for improvement (Rus))

KHOMUTOV, M.V. (a Szovjetunio egeszsgazgyi miniszterenek helyettese)

Soviet public health in the last 40 years. Nepegeszseguzy 39 no.1-2:
3-7 Jan-Feb 58.

(PUBLIC HEALTH

in Russia, progr. in 40 years (Hung))

KHOMUTOV, M.; ZAKHAROV, F.

Order of the Ministry of Public Health of the U.S.S.R. No. 24,
January 21, 1959. Azerb.med.zhur. no.5:83-86 My '59.
(MIRA 12:8)

1. Zamestitel' Ministra zdravookhraneniya SSSR (for Khomutov)
2. Nachal'nik Glavnay meditsinskoy inspeksiisii (for Zakharov)
(PRESCRIPTION WRITING) (DRUGS--LAWS AND LEGISLATION)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

KHOMUTOV, M.V.

~~SECRET~~
Status of and prospects for the development of pharmacy in the
U.S.S.R. Apt.delo 8 no.3:3-10 My-Je '59. (MIRA 12:8)
(PHARMACY)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

KHOMUTOV, M.V. (Moskva)

History of obstetrics in the Moldavian S.S.R. Sov. zdrav. 19 no.6:
68-73 '60. (MIR 13:9)
(MOLDAVIA—OBSTETRICS)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

YEFANOV, P., KHOMUTOV, N.

Metalworkers - Congresses

European conference of metalworkers, Prof. sciuzy, No. e, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, Unclassified.

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

KHOMUTOV, N.A., fel'dsher (selo Leonovka Chernigovskoy oblasti)

Efforts of the rural health station to control traumatism in agricultural operations. Fel'd i akush 22 no.6:35 June '57.
(CHERNIGOV PROVINCE--AGRICULTURE--ACCIDENTS) (MIRA 12:3).

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

IS-8113

29522
S/062/61/000/011/009/012
B103/B147

AUTHORS: Shostakovskiy, M. F., Khomutov, A. M., Chekulayeva, I. A., and
Khomutova, N. M.

TITLE: Synthesis and polymerization of diallyl tartrate

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1961, 2075 - 2077

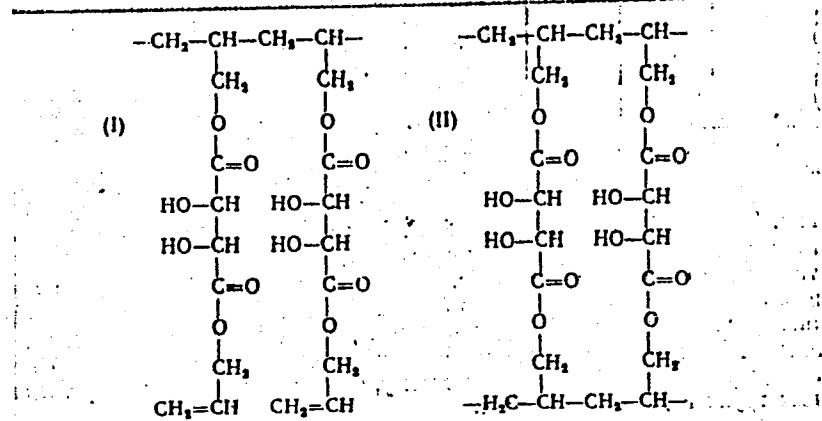
TEXT: Synthesis and polymerization of diallyl tartrate (DAT) were studied. This was done to clarify the effect of its structure on the course of polymerization as well as the polymer properties, in the case where DAT contains further functional groups (OH). The synthesis was effected by esterification of tartaric acid with allyl alcohol in the presence of hydroquinone and sulfuric acid at 70°C in benzene solution. In order to establish the polymerization conditions of DAT, different quantities of the following initiators were used: (a) benzoyl peroxide (Bz_2O_2), and (b) azoisobutyric acid dinitrile, the temperature (60, 95, and 125°C) as well as the reaction time (5 - 21 hr) being varied. It has been found that

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29522
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B103/B147

Synthesis and polymerization...

either linear (I) or tridimensional (II) polymers are formed in different quantitative proportions depending on the reaction conditions:



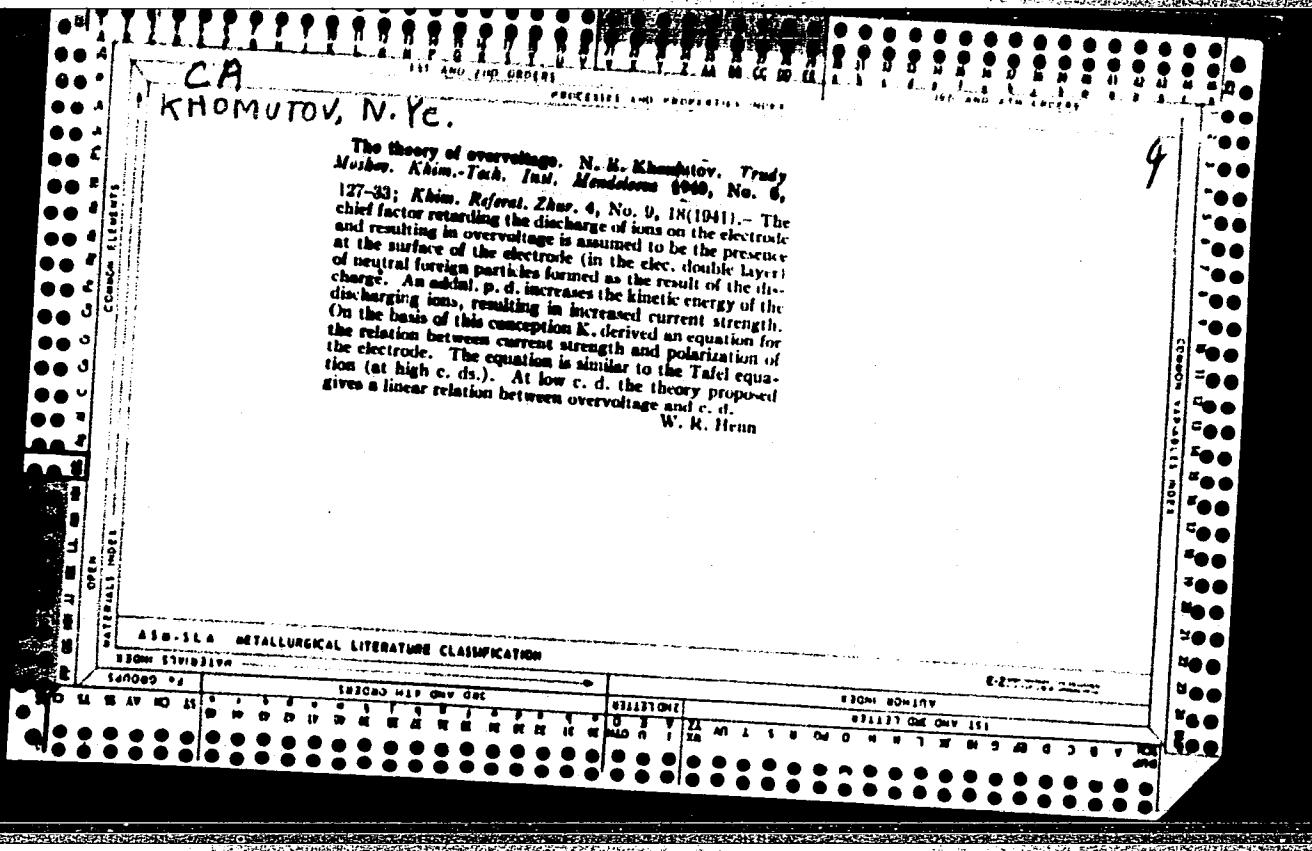
Card 2/4

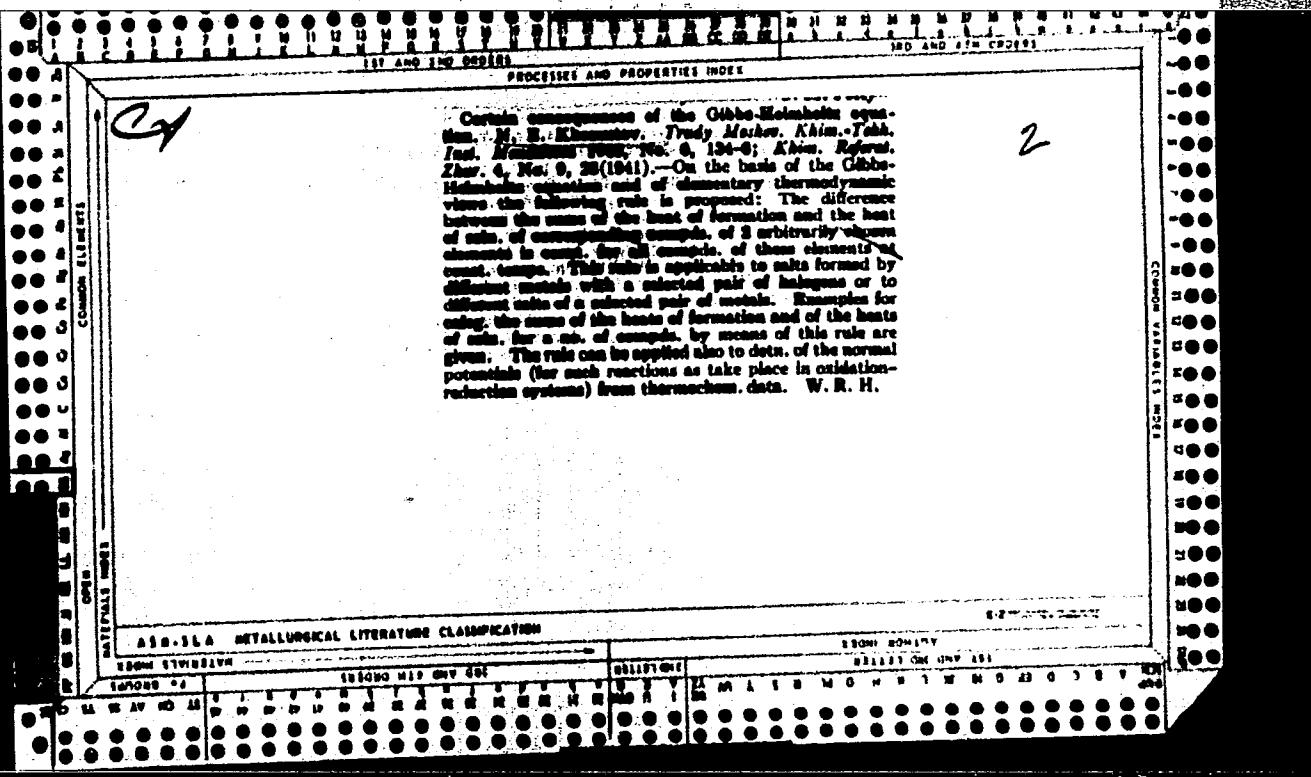
29522
S/062/61/000/011/009/012
B103/B147

Synthesis and polymerization...

Table 1 shows the effect of Bz_2O_2 as initiator on the polymerization of DAT. The polymers have a predominantly cross-linked structure in the presence of 4% - 6% of Bz_2O_2 . Increase of temperature and heating time have the following effects: with 6% of Bz_2O_2 , DAT is practically not polymerized within 5 hr at $60^{\circ}C$, whereas a solid and insoluble polymer is formed at $95^{\circ}C$ (yield 57%). Such a polymer forms at $60^{\circ}C$ only after heating for 21 hr. Polymerization with 6% of Bz_2O_2 at $125^{\circ}C$ for 18 hr gave the best results: 98% of a solid transparent polymer which cannot be charged by static electricity. Its heat resistance is $294^{\circ}C$. (b) is inferior to Bz_2O_2 as initiator. At $95^{\circ}C$, its use yields only 5% of viscous polymer within 18 hr. DAT is less active in polymerization than fumaric and maleic esters. This might be due to the OH groups contained in DAT. There are 2 tables and 6 references: 4 Soviet and 2 non-Soviet. The references are to English-language publications read as follows: Tsunao Araki, Hiroko Jida, Repts Govt. Chem. Ind. Research Inst. Tokyo, 47, 95 (1952); Chem. Abstrs., 47, 10889 (1953). X

Card 3/04





"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

KHGRUTOV, N. YE.

"Investigation of Electrode Processes in the Oxidation of Aniline." Thesis for degree of Cand. Chemical Sci. Sub. 4 Mar 49, Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleev.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernaya Moskva, Jan-Dec 1949.

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

ca

The work of Russian scientists on the electrolysis of organic compounds, N. B. Kharlamov. *Zhur. Fiz. Khim.* 24, 1029-32(1960).—A historical review.
P. W. H.

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

CA

Autocatalytic phenomena in the electrochemical oxidation
of aniline. N. N. Kho and S. V. Gorinchev (D. I.
Mendeleev Chem.-Tech. Inst., Moscow). *Zhur. Fiz.
Khim.*, 34, 1101-6 (1960).—Investigation of the kinetics of
the electrochemical oxidation of PhNH_2 indicates that the re-
action is autocatalytic and occurs by an oxidizing poly-
merization.

Paul W. Howerton

CA

2

Some regularities concerning hydrogen and oxygen overvoltage. N. B. Khomutov (Mendeleev Chem.-Tech. Inst., Moscow). "Zhur. fiz. khim.", 24, 1201-3 (1950).—When the metal lattice parameter r is plotted as abscissa and the H or O overvoltage as ordinates, two curves are obtained having, resp., a min. and a max. at $r = 2.76 \text{ \AA}$. Since the distance between water molts. in the solid state is 2.76 \AA , and the mean value of a in Tafel's equation ($\delta = 2.3RT/aF$) is 0.62, whereas $\cos(105^\circ/2) = 0.61$, the H-O-H angle being 105° , K. favors a geometrical interpretation of overvoltage.

Michel Boudart

PA 190T14

USSR/Chemistry - Electrochemistry of Organic Compounds May 51

"II. Kinetics of the Electrochemical Oxidation of Aniline in Aqueous Solutions," N. Ye. Khomutov, Chem.-Technol Inst imeni D. I. Mendeleyev, Moscow, "Zhur Fiz Khim" Vol. XXV, No 5, p. 607-611

Kinetics of electrochem oxidation of aniline in H_2SO_4 solns of various concns are initially not of the diffusion type. During initial period, the relationship $\lg I = kt + \text{const}$ holds, where I is cd and t the time. This indicates autocatalytic reaction accompanied by oxidative polymerization.

LC

190T14
USSR/Chemistry - Electrochemistry of Organic Compounds (Contd) May 51

Intensive oxidation of aniline occurs at potentials lower than that of the evolution of O_2 . Between 2 anodic potentials of intensive oxidation (lower potential - oxidation of aniline only; higher potential - oxidation plus evolution of O_2) there is an inert zone.

IC

190T14

KHOMUTOV, N. YE.

USSR/Chemistry - Aniline; Oxidation Apr 52
Catalysts

"Electrochemical Oxidation of Aniline in the
Presence of Catalysts," N. Ye. Khomutov

"Zhur Obshch Khim" Vol XXII, No 4, pp 563-565

Describes a series of expts on the electrochem oxidation of aniline by H_2SO_4 solns in the presence of Mn, Cr, V, and Ce compds. The presence of these catalyst favorably affects the yield of quinone.

224729

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

AHOFUTOV, N. YE.

Beketov, Nikolay Nikolayevich, 1826-1911

Academician Nikolay Nikolayevich Beketov (1826-1911). (On the 125th anniversary of his birth). Zhur. fiz. khim. 26 no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress. November, 1952. Unclassified.

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

ИМПУШИК, Н.Я.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Gorbachev, S.V.	"Investigations in the	Moscow Chemicotechnological
Khemutov, N.Ye.	Field of the Kinetics of	Institute imeni D.I.
Izmaylov, A.V.	Electrochemical Reactions"	"Chubarev
Sterostenko, Ye.P.		
Vasenin, R.N.		
Zhuk, N.P.		

SO: W-30604, 7 July 1954

KHOMUTOV

Influence of the Material of the Cathode on the Magnitude
of the Hydrogen Overvoltage. N. E. Khomutov (*Prudy*
Sovetskikh po Elektrokhimi, 1930, 1933, 97-101).—
[In Russian]. On plotting the H overvoltage against the
at. radius of the metal of the electrode, it is seen to be a min.
for metals whose at. radii are near to the radius of the water
mol., 1.38 Å. On each side of this min., the dependence is
approx. linear. Kh. discusses the electrode processes, in-
cluding the formation of activation complexes.—G. V. E. T.

KHOMUTOV, N. E.
USSR/Miscellaneous - Biography

Card 1/1

Authors : Khomutov, N. E.

Title : Vasilii Vladimirovich Petrov - A Leading Physicist, Chemist and the First Russian Electrochemist.

Periodical : Zhur. Fiz. Khim. Vol. 28, Ed. 4, 765-768, Apr 1954

Abstract : A biography of the Russian physicist, chemist and electrochemist. V. V. Petrov, is presented on the 150th anniversary of the establishment of the science of electrochemistry in Russia. Seven references.

Institution : D. I. Mendeleev's Chimico-Technological Institute, Moscow.

Submitted : January 19, 1954

USSR/ Chemistry Physical chemistry

Card : 1/1

Authors : Khomutov, N. E.

Title : Nature of the capacitance of a double layer (Letter to editor)

Periodical : Zhur. fiz. khim. 28, Ed. 6, 1166 - 1168, June 1954

Abstract : A formula, which establishes the relation between the capacitance of a double layer and the radius of atoms of the electrode metal, is presented. The formula is based on the mean-statistical charge of atoms, mean-statistical polarization potential and discrete structure of the double layer. The formula is in complete conformity with experimental data characterizing the capacitance of a double layer in the zone of negative charges of an electrode surface. Nine references: 6 USSR, 1 USA, and 2 German.

Institution : The D. I. Mendeleyev Chemical Technological Institute, Moscow

Submitted : January 31, 1954

KHOMUTOV, N.E.

USSR/Chemistry - Electrochemistry

Card 1/1 Pub. 147 - 26/27

Authors : Khomutov, N. E.

Title : Chronicle. 150 Years of electrochemistry in Russia. Electrochemical investigations of Russian scientists in the first half of the 19-th century

Periodical : Zhur. fiz. khim. 28/9, 1701-1706, Sep 1954

Abstract : The history of electrochemistry in Russia, the work and achievements of Russian and Soviet scientists during the 150 years of electrochemistry, are described. Thirty-seven references: 36-USSR and 1-French (1803-1953).

Institution : ...

Submitted : June 14, 1954

KHOMUTOV, N.Y.C.

The effect of specific volume and solvation on the properties of dissolved substances. / N. B. Khomutov (U.S.S.R.).
Mendeleev Inst. Chem. Technol., Moscow, U.S.S.R.
Khim. i Tekhnika, 30, 2010-21 (1960).—A method is developed for expressing in a simple equation with a semiempirical const. the large effect of the vol. of hydrated dissolved particles on the activity coeff. and other catalyst properties; the method is based on replacing the usual concn. expression in thermodynamic and other equations by the active concn. concept c_a , defined as the ratio of moles of solute to the vol. of the soln. unoccupied by the solvated moles of the substance. The equation derived is similar to empirical equation developed by Stokes and Robinson (*C.A.* 42, 1211a). The osmotic pressures of sucrose solns. calc'd. with the use of the c_a term agree with the exptl. values for the concns. in range 0.0050-2.21 M.

W. M. Sternberg

P.M. M.T.

KHORUTOV, N. E.

3
The dimensions of the radii of hydrated ions. N. E.

Khomatov (D. I. Mendeleev Inst. Chem.-Technol., Moscow). Zhar. fiz. khim. 39, 2160-31 (1965). The radii of the hydrated ion envelope were computed from the equation $k_r = k/r_i$, where k is a const. independent of the nature of the atom, and r_i the cond. of the ions. It is assumed that the I^- hydration envelope is 1 layer of H_2O mol. thick. Computations show that for most univalent atoms the hydration envelopes consist of 1-2 H_2O mol. layers.

W. M. Sternberg

*XES
MT*

KHOMUTOV, N.Ye.

Review of the book "Elektrolyty" by H. Falkenhagen. Reviewed by
Khomutov. Zhur. fiz. khim. 30 no.10:2367 o '56. (MLRA 10:4)
(Electrolytes) (Falkenhagen, H.)

AUTHORS: Khomutov, N. Ye., Sorokina, M. F. SOV/76-32-7-16/45

TITLE: The Kinetics of the Anodic Processes on Platinum in Borate-Carbonate Electrolytes (Kinetika anodnykh protsessov na platine v boratno-karbonatnykh elektrolitakh)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 7, pp. 1556-1564 (USSR)

ABSTRACT: In connection with the fact that in publications no systematic data are found on the kinetics of the electrochemical production of perborates the authors carried out investigations concerning the problem in question. The investigations in the course of the electrode process were carried out according to the method of polarization curves as well as by determining the perborate content in the solution. Polarization measurements of two types were carried out; they were continuous measurements of the anodic potential in a protracted electrolysis at constant current and a gradual increase of the amperage, whereas the anodic potential was determined discontinuously. From the experimental results on the influence of the composition of the solution on the perborate yield may be seen that an increase of the borate content at constant

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SOV/76-32-7-16/45

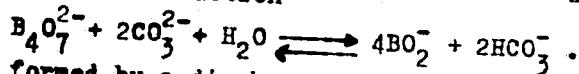
The Kinetics of the Anodic Processes on Platinum in Borate-Carbonate Electrolytes

soda concentration leads to an increase of the yield of active oxygen, and that on the other hand an exchange of the carbonate against the bicarbonate causes an abrupt drop of the content of active oxygen in the solution in the course of electrolysis. The diagrams showing the anodic potential versus time reveal that at great amperages the anodic potential stabilizes rapidly and then remains constant, while in the case of low amperages (of a few microamperes) a stabilization takes place only at 1.1 - 1.2 Volts. The data obtained from the polarization curves at various electrolyte compositions seem to agree with the assumption that perborate is formed in the primary electrode reaction which determines the summary kinetics of the process, as the complex character of the influence of the electrolyte composition on the anodic kinetics of the process can not be explained by the theories by Tanatar (Tanatar) (Ref 1), Foerster (Ferster) (Ref 6) and Arndt (Arndt) (Refs 4, 7). It is assumed that the perborate is formed in consequence of one of the ions BO_2^{-3} or BO_2^- losing its charge, but none of the ions $\text{B}_4\text{O}_7^{4-2}$. From the considerations leading to an explanation of the problem which of the two mentioned ions determines the kinetics of the perborate formation may be seen that the slowest stage of the anodic process in borate-carbonate solu-

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The Kinetics of the Anodic Processes on Platinum in Borate-Carbonate Electrolytes SOV/76-32-7-16/45

tions is the stage of the ion neutralization of BO_2^- , which forms according to the reaction



The BO_2^- ions formed by a discharge may enter into a secondary reaction which leads to the formation of perborates - the nature of this secondary reaction is, however, still open to question. There are 10 figures, 2 tables, and 7 references, 1 of which is Soviet.

ASSOCIATION: Khimiko-tehnologicheskiy institut im. D. I. Mendeleyeva, Moskva (Moscow, Chemical and Technological Institute imeni D. I. Mendeleyev)

SUBMITTED: March 11, 1957

1. Anodes (Electrolytic cell)—Electrochemistry
2. Platinum electrodes—Performance
3. Electrolytes—Chemical reactions
4. Electrolysis—Theory

Card 3/3

KHOMUTOV, N. YE.

PHASE I BOOK EXPLOITATION SOV/2216

"Dovoshchaniye po elektrokhimiia". 4th, Moscow, 1956.

Trudy... [izbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow Izdvo AN SSSR, 1955. 888 p. Errata slip inserted. 2,500 copies printed.
Sponsoring Agency: Akademija nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.M. Frumkin (Resn., Ed.), Academician, O.A. Yesin, Professor, S.I. Zhdanov (Resn., Secretary), B.N. Kabanov, Professor, Ia. M. Kolovyrin, Doctor of Chemical Sciences, B.M. Kabanov, Professor, Lurkovskiy, Doctor of Chemical Sciences, V.V. Losov, P.D. Solov'yev, Professor, Z.A. Solov'yev, V.V. Stender, Professor, and G.M. Florianovich; Ed. of Publishing House: N.O. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry presented by the Department of Chemical Sciences and the Institute sponsored by the Academy of Sciences, USSR. The collection pertains to different branches of electrochemistry. The collection pertains to different branches of electrochemistry. The collection pertains to different salinane processes in metal electrodes, double layer theories and polyelectrolytes. Abridged discussions are given at the end of each publication. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Krasil'shchikov, A.I. (Gosudarstvennyj Institut sotrudnichestva po vysokim temperaturnym i specjal'nym reakcijam - State Institute of the Nitrogen Industry). Electrochemical Reactions of Oxygen. 272

Gorbovich, M.A. (Deceased), and R.I. Kaganovich (Moscow State University). Study of the Mechanism of Some Anode Processes by Combining Electrochemical and The Solid-State Methods. 277

Shlyagin, A.I., and G.A. Bogdanovskiy (Moscow State University). Mechanisms of the Electrochemical Oxidation of Some Compounds on Platinum. 282

Khankin, V.G., M.G. Abramova, and A.P. Tomilov (Moscow Khimiko-tekhnicheskij Institut imeni D.I. Mendelejeva-Moscow Institute of Chemical Technology imeni D.I. Mendelejeva). Mechanism of the Electrolytic Oxidation of Acetone in Alkaline Solutions. 287

Khomutov, N.Ye. (Moscow Institute of Chemical Technology imeni D.I. Mendelejeva). Mechanism of Some Irreversible Electro-

Card 12/34

Polyelectro-Oxidation Reactions. 292

Pomenko, A.S., T.M. Abramova, and I.L. Dankina (Institut triticheskoy khimii AN USSR-Institute of Physical Chemistry AS UrSSR). Mechanism of the Corrosion of Iron, Magnesium, Zinc and Aluminum With the Aid of Heavy Oxygen Isotopes. Discussion [A.M. Olsberg, A.I. Tomilov, P.D. Lukovskiy, G.A. Fedorets and contributing authors]. 302

PART IV. ELECTRODE PROCESSES IN FUSIONS. 309

Yesin, O.A. (Ural'skiy Politehnicheskiy Institut - Ural Polytechnic Institute). Electrode Processes in Pu-ed Oxides. 311
Piontelli, R.-O., Terribile, M., Francini, and G. Montanelli (Italy). In: "Registration of Overvoltage Phenomena in Purified Salts". 323

Card 13/34

NABARCHIK, I., student; SHKARUPA, Z. (Chekhoslovatskaya Respublika);
KHOMUTOV, N.Ye., rukovoditel'

Electrolysis in mixed solutions of borax and potash. Trudy MKHTI
no.26:77-84 '59.
(Electrolysis) (Borax) (Potash)

KHOMUTOV, N. Ye.; POSPELOVA, N. V.

Anodic processes taking place in the electrolysis of carbonates.
Trudy MKHTI no.26:85-95 '59. (MIRA 13:9)
(Carbonates) (Electrolysis) (Electrodes)

KHOMUTOV, N. Ye.

Mechanism of the electrolytic evolution of hydrogen and nature
of overvoltage phenomena. Trudy MKHTI no.26:156-166 '59.

(MIRA 13:9)

(Hydrogen) (Overvoltage)

KHOMUTOV, N.Ya.

Kinetics of the anodic oxidation of aniline and modern theories
of irreversible electrooxidation. Trudy MKHTI no.26:167-179 '59.
(MIRA 13:9)

(Aniline) (Oxidation, Electrolytic)

KHOMUTOV, N. Ye.

State of protons in aqueous solutions, and mechanism of the
anomalous electric conductivity of hydronium and hydroxide ions.
Trudy MKETI no.26:206-217 '59. (MIRA 13:9)
(Protons)

5(4)

SOV/80-32-4-43/47

AUTHORS: Khomutov, N.Ye. and Sklyarov, A.T.

TITLE: Electrolytic Preparation of Potassium Perborate (Elektroliticheskoye polucheniiye perborata kaliya)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 931-932 (USSR)

ABSTRACT: Anode processes, constituting the base of the electrolytic method of sodium perborate preparation, have been insufficiently studied thus far. Theories proposed for the anode formation of perborates [Refs 1-4] were not able to explain the totality of the observed phenomena. In this connection the authors have been studying the electrolysis of solutions of carbonates, borates and their mixtures. The results were partially laid down in a previous publication [Ref 6]. The present note contains some results obtained during investigations into the effect of electrolyte composition on the process of anode oxidation of borate-carbonate solutions. The run of anode processes was observed by measuring the yield of active oxygen in the solution. The application of mixtures of borax with potash as an electrolyte proved to produce a positive effect. The yield of active oxygen for different concentrations of the components is shown in a table. These results indicate a possibili

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Electrolytic Preparation of Potassium Perborate

SOV/80-32-4-43/47

of using the mixtures of borax with potash for electrolytic preparation of perborates. A series of polarization measurements on platinum, carbon, and lead anodes was carried out for borax-potash mixtures of various concentrations. The values of polarization for them are lower than for borax-soda solutions.
There are: 1 table and 6 references, 2 of which are Soviet, 3 German and 1 English.

SUBMITTED: February 18, 1958

Card 2/2

5.4130

68854

AUTHOR: Khomutov, N. Ye.S/076/60/034/02/018/044
B010/B017TITLE: On the State of ¹⁹Protone in Aqueous Solutions

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 2, pp 380-386 (USSR)

ABSTRACT: In recent years, the electrostatic theory of ion hydration has been developed on the basis of papers by K. P. Mishchenko, A. M. Sukhotin, S. I. Drakin, and V. A. Mikhaylov. However, no electrostatic computation of proton hydration has been made. In the present paper, an electrostatic computation of the isobaric potential of proton hydration was made according to a method similar to that described by Mishchenko and Sukhotin (Refs 5,10). In principle, this method consists in dividing the hydration process into two stages, i.e. formation of ion hydrates in the gas phase, and their subsequent introduction into the solution. The isobaric potential of the formation of the gaseous ion hydrate is computed according to the theory of the ion-dipole interaction (considering individual effects), and the potential of the second stage is computed according to Born's theory. The summation of the energetic effects of the individual stages leads to an approximation equation which expresses the dependence ΔZ_h of the isobaric potential of proton hydration on the distance r of the proton from the center

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On the State of Protons in Aqueous Solutions

68854

S/076/60/034/02/018/044
B010/B017

of the dipole of the water molecules:

$$\Delta Z_h = -N \left[\frac{e\mu}{r^2} + \frac{e^2\alpha}{2r^4} + \frac{e^2}{2r} \left(1 - \frac{1}{\epsilon} \right) \right] \quad (1)$$

(N = Avogadro's number, μ = value of the dipole moment, α = full polarizability of the water molecules, ϵ = dielectric constant). For the experimentally found quantity $\Delta Z_h = 251.5$ kcal/mol at 25° , $r = 1.38 \text{ \AA}$, i.e. the proton is in aqueous solution on the periphery of the water molecule in the interatomic space which is in agreement with the assumption of an H_3O^+ particle. To a certain extent, the position of the proton may be regarded as free, and, similar to the state of the electrons in the metal, it may be termed "proton gas". The latter, however, shows considerable differences as compared with the electron gas in metals. For the proton which is in equilibrium and which is on the line between the centers of two water molecules, it may be assumed that it is at a distance of 1.38 \AA from one, and 1.47 \AA from the other water molecule. In accordance with the experimental data, the electrical conductivity of the "proton gas" can be expressed by the following equation:

$$\lambda_o = \frac{1}{3} \frac{1}{vF^2} \quad (4) \quad (1 = \text{free path of the particle}, v = \text{thermal}$$

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On the State of Protons in Aqueous Solutions

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particle velocity, λ_0 = electrical conductivity in the case of infinite dilution). A paper by A. N. Frumkin is mentioned. There are 22 references, 10 of which are Soviet.

ASSOCIATION:

Khimiko-tehnologicheskiy Institut im. D. I. Mendeleyeva Moskva
(Institute of Chemical Technology imeni D. I. Mendeleyev, Moscow)

SUBMITTED:

May 10, 1958

Card 3/3

66155
S/076/60/034/008/025/C39/xx
B015/B063

26.1610

AUTHOR: Khomutov, N. Ye.

TITLE: The Parameter α of the Kinetic Equations of the Reactions of Electrolytic Evolution of Hydrogen and of Other Electrode Reactions

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8,
pp. 1788 - 1794

TEXT: In a previous paper (Ref.3) the author assumed that the discharge rate of hydrogen ions is determined by the transfer of the proton from the hydroxonium ions or water molecules (which cover the double layer of the electrode) to the surface of the electrode. In concentrated solutions, the double layer on the electrode can be regarded as a dense Helmholtz electric double layer, and it may be assumed that the reduction of activation energy of hydrogen-ion discharge by the electric field of the electrode is determined by the energy imparted to the proton passing through the double layer. Proceeding from these assumptions the author derived the equation $\alpha = 1/s$ (6) which represents the relationship between the transference

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S/076/60/034/008/025/039/XX
B015/B063

The Parameter α of the Kinetic Equations of
the Reactions of Electrolytic Evolution of
Hydrogen and of Other Electrode Reactions

number α , the density s of the Helmholtz layer, and the distance l traveled by the proton in the layer. Hence, α represents the ratio of the distance traveled by the proton to the entire distance traveled by proton and electron during the production of the hydrogen atom on the electrode. Assuming that $l = 1.38 \text{ \AA}$ and $s = r_M + r_{H_2O}$ (r_{H_2O} = radius of the water

molecule; r_M = radius of the atom of the electrode metal) one obtains

$\alpha = r_{H_2O}/r_M + r_{H_2O}$ (8), wherefrom α can be calculated. A comparison between

experimental values for α and the values calculated for Pb, In, Hg, Bi, Cd, Sn, etc. shows that there is good agreement for metals with a radius greater than 1.38 \AA . For metals capable of adsorbing large quantities of atomic hydrogen, the diameter of the hydrogen atom, $2r_H = 0.60 \text{ \AA}$, is to be substituted in (8), i.e., $\alpha = [r_{H_2O} + 2r_H]/[r_M + 2r_H + r_{H_2O}]$ (10) in

order to attain good agreement between experiment and calculation. An analysis of (6) and (8) permits a prediction of the variation of α with

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The Parameter α of the Kinetic Equations of
the Reactions of Electrolytic Evolution of
Hydrogen and of Other Electrode Reactions

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the conditions of electrolysis. Experimental data on the electrolytic production of chlorine and bromine with Pt electrodes (Ref.15) agree well with the values calculated from (6). N. A. Izgaryshev, Ye. A. Yefimov, V. S. Maloshuk, and S. S. Kruglikov are mentioned. There are 2 tables and 23 references: 17 Soviet, 3 British, 1 US, and 1 German.

ASSOCIATION: Khimiko-tehnologicheskiy institut im. D. I. Mendeleyeva
Moskva (Institute of Chemical Technology imeni
D. I. Mendeleyev, Moscow)

SUBMITTED: November 20, 1958

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Card 3/3

KHOMUTOV, N.Ye.; EHERIL', V.I.

Determination of aniline by a potentiometric titration method
using bromination. Zhur.anal.khim. 17 no.6:763 -766 S '62.
(MIRA 16:1)

1. Moskovskiy khimiko-tehnologicheskiy institut im. D.I.
Mendeleyeva.
(Aniline) (Potentiometric analysis) (Bromination)

KHOMUTOV, N.Ye.

Nature of solvation. Part 1. Zhur. fiz.khim. 36 no.9:
2043-2046 S '62. (MIRA 17:6)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni
D.I. Mendeleyeva.

KHOMUTOV, N.Ye.; BYSTROV, V.I.

Kinetics of anodic processes on platinum in aqueous solutions of phenol. Zhur.fiz.khim. 36 no.10:2246-2247 O '62. (MIRA 17:4)

1. Moskovskiy ordena Lenina khimiko-tehnologicheskiy institut imeni Mendeleyeva.

KHOMUTOV, N.Ye.

Nature of solvation. Part 2. Zhur. fiz. khim. 36 no.11;
2477-2478 N'62. (MIRA 17:5)

1. Khimiko-tehnologicheskiy institut imeni Mendeleyeva.

43472

S/076/62/036/012/007/014
B101/B180

AUTHOR: Khomutov, N. Ye. (Moscow)

TITLE: Interrelationship between certain thermodynamic, electronic, and electrochemical properties of metals. I. Relationship of the work function and zero charge potentials, with the free energies of metal lattices

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 12, 1962, 2721 - 2726

TEXT: Empirical equations are suggested for the relationship the standard enthalpy ΔH° , standard isobaric - isothermal potential ΔZ° , and the work function φ . The equations are designed for use in checking experimental data which, due to the crystal orientation or to surface impurities caused by oxide films or adsorption, do not yield reliable φ values. $\varphi_{Hg} = 4.52 F-v$ is taken as reliable, and the equation $\varphi = 0.45 \Delta Z^\circ$ is suggested for the relation between φ and the isobaric - isothermal potential ΔZ° , on sublimation of the metal and ionization of atoms into univalent ions. The published data plot approximately into a straight

Card 1/2

Interrelationship between certain ...

S/076/62/036/012/007/014
B101/B180

line, with Be (~25%) and Tl (~22%) showing the greatest deviations. $\psi = 0.40\Delta H_1$, with similar deviations, is also valid. For atom ionization into bivalent ions, $\psi = 0.305\Delta Z_2$ is valid, where the deviations for Ba, Sr, Ca, Mg, Be, Cd, Zn, Au, Ag, Cu, Tl, In, Ga, Al, Ni, Co, Fe, Pd, Rh, Sb, As, Te, Mn, and Re are less, and for Sn, Pb, Cr, and Ti more, than 6%. The equation $\xi = -4.72 + 0.305\Delta Z_2$ v is suggested for determining the zero charge potential ξ . Considerably differences between theoretical and experimental values were shown by Pt: 0.64 v calculated and 0.1, 0.27 v experimental; Pb: -1.04 v calculated and -0.69 v experimental; and Te: 0.25 v calculated and 0.61 v experimental. There are 4 figures and 1 table.

ASSOCIATION: Moskovskiy ordena Lenina khimiko-tehnologicheskiy institut imeni D. I. Mendeleyeva, Kafedra fizicheskoy khimii (Moscow "Order of Lenin" Institute of Chemical Technology imeni D. I. Mendeleyev, Department of Physical Chemistry)

SUBMITTED: July 19, 1961

Card 2/2

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

KHOMUTOV, N.Ye.

Law of constant differences. Trudy MKHTI no.38:68-71 '62.
(MIRA 16:7)

(Thermochemistry)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

KHOMUTOV, N.Ye.

Nature of the hydration of ions. Trudy MKHTI no.38:87-93 '62.
(MIRA 16:7)

(Ions) (Hydration)

KHOMUTOV, N.Ye.

Nature of the metallic state. Trudy MKHTI no.38:108-111 '62.
(MIRA 16:7)

(Metals)

(Electron gas)

(Crystal lattices)

KHOMUTOV, N.Ye.

Energy of metal lattices and the surface properties of metals.
Trudy MKHTI no.38:111-115 '62. (MIRA 16:7)

(Metals—Thermodynamic properties)
(Crystal lattices) (Electron gas)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

KHOMUTOV, N.Ye.; SKORNYAKOVA, T.N.

Use of cells with a flowing electrolyte. Zhur. prikl. khim. 36
(MIRA 16:11)
no.8:1772-1776 Ag '63.

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2"

KHOMUTOV, N.Ye.; KHACHATURIAN, M.G.; ZAKHODYAKINA, N.A.

Kinetics of anodic processes in solutions of carboxylic acid salts.
Zhur.fiz.khim. 37 no.1:189-193 Ja '63. (MIRA 17:3)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni Mendeleyeva.

S/076/63/037/003/002/020
B101/B215

AUTHOR: Khomutov, N. Ye. (Moscow)

TITLE: Mutual relations between some electron and electro-chemical properties of metals. II. Relation between overvoltage and free enthalpies of metal lattices

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 3, 1963, 526-530

TEXT: Based on previous publications, the author shows: (1) The approximately linear dependence of the constant a of the Tafel equation on the change ΔZ_1° of the free enthalpy of Th, Pb, Cd, Hg, Zn, Ag, Cu, Fe, Pt, Co, Ni, Sb, Ge, Mo, Pd, Rh, Bi, Mg, Al on sublimation and ionization into univalent ions; (2) approximately linear dependence of the oxygen overvoltage on ΔZ_1° ; (3) approximately linear dependence of a on ΔZ_2° on ionization into bivalent ions; and (4) approximately linear dependence of oxygen overvoltage on ΔZ_2° . The explanation of these

Card 1/2

Mutual relations between some electron ...

S/076/63/037/003/002/020
B101/B215

dependences was based on earlier publications (Zh. fiz. khimii, 36, 721, 1962; Tr. MkhTI, 32, 120 1961) on the activation of electrochemical processes, according to which the electrical field delivers current to the electrode by protons and electrons migrating through the double layer. The linear dependence $-(RT/\alpha F)\ln i_0$ on ΔZ_1 is confirmed in connection with the theory of delayed discharge. There are 4 figures. The most important English-language reference is: P. Van, R. Ryselberghe, H. A. Joansen, J. Electrochem. Soc., 106, 355, 1959.

ASSOCIATION: Khimiko-tehnologicheskiy institut im. D. I. Mendeleyeva
(Institute of Chemical Technology imeni D. I. Mendeleyev)

SUBMITTED: October 12, 1961

Card 2/2

KHOMUTOV, N.Ye.

"Kinetics and Mechanism of Electrolytic Reduction of Streptomycine
and Nitrobenzenes-M Sulphoacid."

Report presented at the 11th meeting CITCE, Intl. Comm. of
Electrochemical Thermodynamics and Kinetics, Moscow, 19-25
Aug 63.

Mendeleev Chemico-Technological Institute, Moscow, U.S.S.R.

KHOMUTOV, N. Ye.

Interrelation between certain thermodynamic, electron, and
electrochemical properties of metals. Part 2. Zhur. fiz.
khim. 37 no. 3:526-530 Mr '63. (MIRA 17:5)

1. Khimiko-tehnologicheskiy institut imeni Mendeleyeva, Moskva.

KHOMUTOV, N.Ye.; SKORNYAKOV, V.V.; FADEYEVA, T.P. (Moscow)

Effect of the electrode material on the electrolytic reduction
of streptomycin to dihydrostreptomycin. Zhur. fiz. khim. 38
no.1:102-107 Ja'64. (MIRA 17:2)

1. Khimiko-tehnologicheskiy institut imeni Mendeleyeva.

KHOMUTOV, N.Ye.

Approximate method of calculating standard electrode potentials.
Zhur. fiz. khim. 38 no.5:1254-1260 My '64. (MIRA 18:12)

1. Khimiko-tehnologicheskiy institut imeni Mendeleyeva.
Submitted Aug. 1, 1963.

KHOMTOV, N.Ye.; SOROKINA, N.F.

Kinetics and mechanism of anodic processes in potassium carbonate solutions. Zhur. fiz. khim. 38 no.6:1564-1568
Je '64. (MIEA 18:3)

1. Khimiko-tehnologicheskiy institut imeni Mendeleyeva, Moskva.

KHOMUTOV, N.Ye.; SOROKINA, M.F.

Quantitative determination of potassium peroxocarbonate by the iodo-metric method in an alkaline medium. Zhur.anal.khim. 19 no.9:1165-1167 '64.
(MIRA 17:10)

J. Moskovskiy khimiko-tehnologicheskiy institut imeni Mendeleyeva.

KHOMUTOV, N.Ye.; SKORNYAKOV, V.V.

Electroreduction of oxygen in sulfate solutions of streptomycin. Zhur. fiz. khim. 38 no.2:342-344 F '64. (MIRA 17:8)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni Mendeleyeva.

KHOMUTOV, N.Ye.

Kinetics of electrolytic oxidation with simultaneous evolution
of oxygen and of electrolytic reduction with evolution of
hydrogen. Zhur. fiz. khim. 38 no.2.510-517 F '64.

(MIR: 17:8)

1. Moskovskiy khimiko-tehnologicheskiy Institut imeni
Mendeleyeva.

KHOMUTOV, N.Ye.; SOROKINA, M.F.; SHELUD'KO, O.V.

Anodic processes in the electrolysis of mixed solutions of borax and
soda. Trudy MKHTI no.44:63-66 '64.
(MIRA 18:1)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722220013-2

SOROKINA, M.F.; KHOMUTOV, N.Ye.

Electrochemical production of potassium percarbonate and the study of
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Filatova, L. S.

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TITLE: A method for purifying caprolactam. Class 12, No. 176301

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TOPIC TAGS: caprolactam, sodium compound, oxidizing agent, percarbonic acid

ABSTRACT: This Author Certificate presents a method for purifying caprolactam by oxidation and distillation. To improve the quality of caprolactam, salts of percarbonic acid, such as sodium percarbonate, are used as oxidizing agents.

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